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The effects of the main character's sex and occupation on fifth graders' interest in and comprehension of a story were investigated. Two fifth-grade-level stories of about 370 words were written about a pilot (interesting for boys), a ballet dancer (interesting for girls), and a social worker (equal appeal). Each story was written in two versions: one with a female main character and the other with a male main character. The readers' responses to each story were measured by a semantic differential scale and a six-point like-dislike statement scale. Three hundred and twelve boys and girls from 13 randomly selected Saskatoon, Saskatchewan, public school fifth-grade classrooms were chosen as subjects. The study concluded that boys and girls do react in distinct ways to the same content and that research can predict which content will have greater or lesser appeal for boys and girls. Additional conclusions and comments are presented. References are included. (RT)

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INTEREST AND COMPREHENSION IN SEX-TYPED MATERIALS

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While much is written about the need to meet reading interests in order to maximize comprehension of content, a teacher's decision to use a particular reading selection in a mixed class of boys and girls could ignore the normal self-selection patterns of one sex or the other. As a consequence, the choice could affect comprehension of a large portion of the class.

If the interests of boys or girls are not met by a reading selection, Norvell would sacrifice the material and substitute something else for it; he wrote,

> Sex is so powerful a factor in determining children's enjoyment of reading materials that any selection considered for use in mixed classes should be checked for interest for boys and for girls, and if rated low by either sex, rejected in favor of one approved by both groups. (5)

The purpose of the study was to determine how a story about a culturally sex-typed occupation and the sex of the main character in the story affected the interest and comprehension of fifth grade boys and girls. Specifically, information was sought to answer the following questions:

1. Does the occupation of the main character differentiate interest and comprehension of boys and girls?
2. Does the sex of the main character affect the interest and comprehension of boys and girls?
3. May sex-based interest be very evident, but not be an important factor to be considered when planning and using content for a reading program in which boys and girls are taught together with the same material?

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Two relatively new techniques of measurement were used to assess interest and understanding. They were semantic differential scales and cloze tests.

Procedures

Based on census information, a review of the literature and field research, three occupations were selected to elicit different patterns of interest from boys

and girls. They were: ballet dancer, expected to appeal to girls, but not boys; pilot, expected to appeal to boys, but not girls; social worker, expected to have equal appeal to boys and girls. As a vehicle for exploring the problem, then, two fifth grade level stories of approximately 370 words in length were written about each occupation. Thus there were six basic stories.

To manipulate the effect the main character would have on interest and comprehension, each story was written in two versions: one with a female main character and the other with a male main character. As shown below, versions differed only in the first name of the main character and other words pertinent to the sex of the main character, such as pronouns.

121	Arnold Banks, Ballet Dancer	122	Ann Banks, Ballet Dancer
	It centers on a cowboy. With the odds against him he fights for his love and the ranch his father left him.		It centers on a cowgirl. With the odds against her she fights for her love and the ranch her father left her.

The reading content was equated with the Dale-Chall Readability Formula and in the field with cloze tests which were used as a basis for revisions and to confirm that the stories were of comparable difficulty. The preliminary tests were administered to a class of fifth grade accelerates [IQ range 122 to 160]. As defined by the formula, the final range of readability found for the six stories was 5.0 to 5.6.

The readers' responses to each story were measured in two ways. Subjects reacted to all six complete stories by marking an inventory consisting of thirteen semantic differential scales (4) and a traditional six point like-dislike statement scale (1). Comprehension was checked with a fifty deletion cloze test for each story in which every seventh word was omitted and replaced by a line five spaces in length.

The design of the study required that boys and girls be divided into four

equal groups, two of each sex. This was related to the need to have two forms of the test in order to compare the male with the female main character within identical content.

The subjects of the investigation were 312 boys and girls from thirteen randomly selected public school fifth grade classrooms located in Saskatoon, Saskatchewan (Canada). The decision to use fifth graders was made because it was felt that at their point in life they are avidly searching for a self-identity. Consequently, they would react strongly to appropriate and inappropriate materials involving males and females, which, in turn, might affect their comprehension.

Results

Equivalence of the sexes was found in two ways. Scores on the Saskatoon Public Schools Silent Reading Test showed only chance differences between boys' and girls' mean scores [$t=.46$ $p=\langle 70\rangle 60$]. Data from combined cloze scores for six stories (balancing interest) confirmed the equivalence of boys' and girls' reading ability [$t=.27$ $p=\langle 80\rangle 70$].

For the purpose of this paper, comparisons between and within sexes will focus on the two sex-typed occupations, ballet dancer and pilot. Furthermore, analysis of interest is based on the traditional rating scale rather than the semantic differential scales.

Occupations

Interest. The sign test indicated that boys significantly preferred pilot content to ballet dancer content [84% to 4%, with 12% tied]. More neutral than boys, girls, nevertheless, significantly favored ballet dancer content [41% to 28%, with 31% tied].

Cloze scores. Despite a very strong preference for pilot content, there was little difference in boys' mean cloze scores for the two content types [$t=1.07$ $p=\langle 40\rangle 30$]. On the otherhand, though girls did not overwhelmingly favor ballet dancer content,

nevertheless, their cloze scores for that content were significantly higher than for pilot content [t=11.83 p=.001]. Each sex maintained a significant superiority over the other in the preferred sex-typed content.

Main Characters

Interest. Approximately 40 per cent of total inter-ratings between all main characters indicated that boys and girls made no distinction between male and female main characters. However, analysis of non-ties indicated significantly more boys' ratings were higher for male main characters [p=.01]. and more girls' ratings were higher for the female [p=.01]. Specifically, 43 per cent of the girls' combined ratings for all stories favored the female and 17 per cent favored the male as contrasted to 33 per cent of the boys' ratings which favored the male while 23 per cent favored the female.

Within individual story comparisons, boys significantly preferred the male main character only in the best liked pilot content, whereas girls showed a preference for the female in each content. Only a story about a female pilot had almost equal appeal for boys and girls [p=.41]; all other differences between and within sexes for that story were significant.

Cloze Scores. For each sex, all differences in cloze score means between male and female main character versions of each story were not significant [range of p= <.90>.15].

Conclusions and Discussion

The use of sex-typed content, within the limitations of the study indicated that:

1. boys and girls react in distinct ways to the same content.
2. research can predict which content has greater or less appeal for boys or girls.
3. though girls' reactions to content are not as divergent as boys', their

preference has a significant effect on their comprehension.

4. while content is important in determining interest, for girls the sex of the main character affects that interest.
5. the content of an article is the primary factor in determining the appeal of an article for boys, with sex of the main character of secondary importance. Neither content or sex of the main character appears to affect boys' comprehension.
6. neither boys or girls appear to reject the opposite sex in a story.
7. relative to each other boys and girls perform with better efficiency when reading materials they specifically enjoy.
8. the relationship between interest and comprehension is nebulous.

Further elaboration of this last conclusion is necessary. It is quite possible that the instruments devised to measure interest in this study are not sufficiently sensitive to do much more than confirm anticipated sex differences. Over 500 intercorrelations between each scale and cloze scores resulted in few significant correlations and none higher than .40. This suggests that these scales are not valuable in predicting comprehension of materials with different degrees of interest for fifth grade boys and girls. Other studies using different populations support this finding (3,7). Correlations between ratings and comprehension tend to be zero, though one study reported a correlation of .53 (2). Additional confirmation of the limited usefulness of scales is evident from the very dramatic, if not surprising differences found between the sexes when within sex analysis of comprehension was made for the most and least appealing content. Boys were not detectably influenced by their interest, while girls were.

This study points up that concern for meeting girls' interests should be no less than concern for meeting boys' interests. Failure to do so could limit what girls are able to learn. For example, this study provides evidence that a strong female main character could enhance the appeal of content for girls.

The search for experimental selections revealed that publishers appear to ignore the interests of girls and often avoid using female main characters. The bulk of materials are concerned with things boys do and like. While many reasons are voiced for favoring boys with special content the preponderance of such content is based on the expectancy that girls will accept male content and boys will spurn female content. Perhaps the moderate feelings expressed by girls lead to such conclusions, but the fact that girls perform more successfully in preferred feminine content suggests that inordinate use of predominantly male content violates their best interests and therefore is educationally unsound.

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